Postgraduate artificial intelligence

DEAKIN UNIVERSITY

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VISIT…

Postgraduate artificial intelligence

Be ready for the jobs of the future.

Artificial intelligence (AI) is driving digital disruption, with new technology helping redefine many industries. Many companies are looking to take advantage of recent advances in AI, which is creating a large demand for skilled professionals around the world.

Why study at Deakin University?

Learn from experts

While studying AI at Deakin, you will learn from expert researchers at Deakin University's Applied Artificial Intelligence Institute (A^2I^2), who are pushing the boundaries of how humans work in partnership with artificial intelligence. The $33 million institute partners with industry to drive the development of human-in-the-loop AI and AI experimentation, with a focus on training the next generation for jobs of the future.

Professionally accredited

The Master of Applied Artificial Intelligence and the Master of Applied Artificial Intelligence (Professional) are provisionally accredited with the Australian Computer Society (ACS). Accreditation ensures a high quality of education and provides you with international recognition as an ICT industry professional so you stand out to future employers.

Premium online study

For the past 40 years, we've been perfecting distance and online learning. Our classes are designed to be online, which means you'll be learning with highly engaging, interactive and audio-visual content designed for an optimal online learning experience. This premium interactive platform is also backed by Australia's highest rated tech support [5]. Our dedicated IT support staff are available outside regular hours, plus you can access our online library 24/7.

Invest in your skills now with an online postgraduate AI degree, to be ready for what comes next.

[1] 2020 Student Experience Survey, based on undergraduate students, UA benchmark group Victorian universities.
[2] Australian Graduate Recruitment Industry Awards 2017–2020, winner for most popular career service in Australia.
[3] ARWU Rankings 2022.
[4] 2020 Student Experience Survey, UA benchmark group Victorian universities.
[5] According to the Voice Project IT Service Quality Support Benchmark Survey.

Victoria's #1 university for educational experience [1]

#1 university career service in Australia [2]

Top 1% of universities worldwide [3]

Victoria's #1 university for teaching quality [4]

Victoria's #1 university for student support [4]

Connect with 60,000+ students online

▶ Study no matter your background

You don't need an IT background to study postgraduate artificial intelligence at Deakin. We offer tailored degrees that enable you to kick start your career in this exciting field.

Progress your career

Whether you're looking to fill a knowledge gap in your current role, develop a specific set of skills to boost your immediate job prospects, or gradually strengthen your expertise to secure your long-term employability, studying a graduate certificate is an affordable and accessible way to achieve your career goals.

Graduate Certificate of Artificial Intelligence

Deakin's Graduate Certificate of Artificial Intelligence provides IT professionals with foundational knowledge of AI and the skills necessary to design and develop advanced AI-driven solutions to solve challenging, real-world problems.

You will gain hands-on experience in the development of software solutions and the use and development of AI. Our world-leading research in AI feeds directly into our classrooms, meaning that you will be learning at the cutting-edge of industry expectations and capabilities.

As a graduate you will have a thorough understanding of the design, development and operation of AI-driven software solutions and will be able to engage with artificial intelligence across a range of industries.

Course information

Course code: S536
Campus: Waurn Ponds (Geelong), Online
Duration: 0.5 years full-time study or part-time equivalent
Intake: March (Trimester 1) and July (Trimester 2)

▶ Be ready for what's next

Advance your career and graduate ready for the estimated 1.2 million new tech jobs in Australia by 2034^

Course structure

To complete the Graduate Certificate of Artificial Intelligence, students must attain 4 credit points (cp) (part-time over 1 year), which must include the following:

▶ Core units

Machine Learning (1cp)

Mathematics for Artificial Intelligence (1cp)

▶ Course elective unit

Engineering AI Solutions (1cp)

OR

Human Aligned Artificial Intelligence (1cp)

▶ Elective

Level 7 SIT elective* (1cp)

Academic Integrity (0cp compulsory unit)

* Excluding SIT771, SIT772, SIT773, SIT774

2cp + **1cp** + **1cp** = **4cp**
Core units — Course elective unit — Elective — Total

Entry pathways

Upon completion of the Graduate Certificate of Artificial Intelligence, you could use the credit points you've earned to enter into further study. Those interested in pursuing further study in this field are encouraged to consider the Master of Artificial Intelligence.

Career opportunities

Deakin's Graduate Certificate of Artificial Intelligence prepares students to be able to engage effectively with specialists in the area of artificial intelligence.

^Deloitte (2021) ACS Australia's Digital Pulse, Future directions for Australia's Technology workforce

A postgraduate qualification can be undertaken by students who have already completed an undergraduate degree or possess significant, demonstrable work experience. Postgraduate courses include graduate certificates, graduate diplomas, and master's degrees, as well as specialist programs for industry professionals.

Recognition of prior learning

We value your experience and qualifications. That's why every new course application at Deakin is automatically assessed for recognition of prior learning (RPL). RPL turns your study and life experience into course credit – credit that can reduce your study duration, as well as the cost of your tuition.

For more information visit: **deakin.edu.au/study/how-to-apply/recognition-of-prior-learning**

Interested in applying?

Entry requirements

Entry will be based on performance in:

- Bachelor degree in related discipline, **OR**
- Bachelor degree in any discipline and two years relevant work experience, **OR**
- Graduate Certificate of Information Technology or equivalent, **OR**
- Evidence of academic capability judged to be equivalent.

How to apply

Applications can be made online via **apply.deakin.edu.au/direct-applications.**

For more information about entry requirements, submitting an application or the application process, please visit **deakin.edu.au/courses/how-to-apply.**

▶ For more information about this course, including further course structure and units details, visit **deakin.edu.au/course/graduate-certificate-artificial-intelligence.**

▶ **Deakin alumni discount**

If you're a Deakin alumnus commencing a postgraduate award course, you may be eligible to receive a 10% reduction per unit on your enrolment fees.

For more information, visit **deakin.edu.au/alumni-discount.**

Master of Applied Artificial Intelligence

Deakin's Master of Applied Artificial Intelligence equips you with the specialist knowledge and skills necessary to design and develop software solutions that harness the latest advances in artificial intelligence (AI).

This course develops your understanding of AI technologies, deep learning, reinforcement learning and the application of these algorithms in computer vision and speech processing.

You will learn to apply advanced knowledge of artificial intelligence to the research and evaluations of AI and explore the complexities of introducing AI solutions in a human context, both from an ethical and an engineering perspective.

You will also gain hands-on experience in the design, development and implementation of software solutions that incorporate novel applications of AI. Our world-leading research in AI feeds directly into our classrooms, meaning that you will be learning at the cutting edge of industry expectations and capabilities.

Course information

Location: Waurn Ponds (Geelong), Online
Duration: 1-2 years full-time study, or part-time equivalent
Intake: March (Trimester 1), July (Trimester 2) and November (Trimester 3)
Deakin code: S736

Course structure

To complete the Master of Applied Artificial Intelligence, you will complete 8, 12 or 16 credit points, depending on your prior experience. Typically, full-time students choose to study 4 units per trimester and usually undertake two trimesters each year.

The course is structured in three parts which comprise the following number of credit points (cp):

$$4cp + 4cp + 8cp = 16cp$$

Part A   Part B   Part C   Total

Depending upon prior qualifications and/or experience, you may receive credit for Part A (and complete 12cp of study to attain the Master of Applied Artificial Intelligence) or credit for both Part A and Part B (and complete 8cp of study to attain the Master of Applied Artificial Intelligence).

▶ For more information about this course, including further course structure and units details, visit **deakin.edu.au/course/master-applied-artificial-intelligence.**

▶ Part A – Foundation Information Technology Studies

Object-Oriented Development (1cp)

Database Fundamentals (1cp)

Software Requirements Analysis and Modelling (1cp)

Web Technologies and Development (1cp)

▶ Part B – Introductory Artificial Intelligence Studies

Machine Learning (1cp)

Mathematics for Artificial Intelligence (1cp)

Professional Practice in Information Technology (1cp)

Plus one level 7 SIT elective (1cp)

▶ Part C – Mastery Applied Artificial Intelligence Studies

Deep Learning (1cp)

Reinforcement Learning (1cp)

Human Aligned Artificial Intelligence (1cp)

Applications of Computer Vision and Speech Processing (1cp)
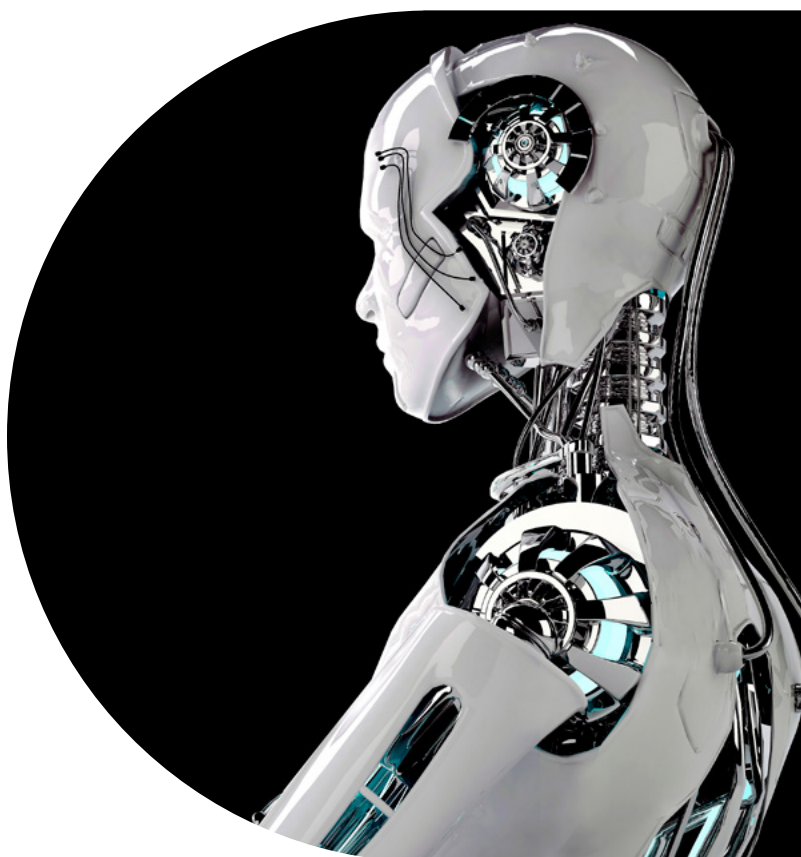
Engineering AI Solutions (1cp)

Natural Language Processing (1cp)

Team Project (A) – Project Management and Practices[#] (1cp)

Team Project (B) – Execution and Delivery[#] (1cp)

Academic Integrity (0cp compulsory unit)

[#] Students are recommended to undertake Team Project A and B in consecutive trimesters.

'We rely on state-of-the-art open source tools, which are agile by definition. As a researcher in the science of data and an open source software developer myself, I need to be on top of things, and this is reflected in our units.'

Dr Marek Gagolewski
Senior Lecturer in Applied Artificial Intelligence

Career opportunities

AI offers an exciting future for students as more industries spend time and money on improving what they do through learned behaviour and operating efficiencies. However, this is the tip of the iceberg and many more challenging, real-world problems remain to be solved.

The demand for intelligent systems such as driverless cars and smart digital assistants require skilled AI professionals to develop and implement them. The number of jobs emerging in the AI space is increasing each year and will enable productivity increases for most industries across the globe.

Graduates will have the specialist knowledge and skills to work on the design, development and operation of AI-driven software solutions involving AI, across a broad range of industry sectors. You may find employment in roles such as:

- machine learning engineer
- AI product manager
- data scientist
- AI engineer
- AI technology software engineer
- computer vision engineer
- data analyst
- AI ethicist
- AI architect.

▶ Learn from the world's best

Computer science at Deakin is ranked in the top 1% of universities worldwide^, reflecting teaching excellence in a critical Australian industry.

Interested in applying?

Entry requirements

You may be eligible to undertake the Master of Artificial Intelligence over a shorter duration depending on your academic and professional background.

Depending on your prior experience, your course will be:

▶ 2 years full-time (4 years part-time)

Your admission for the 16 credit Master of Applied Artificial Intelligence will be based on performance in:

- Bachelor's degree or other qualification at a higher AQF level in any discipline, **OR**
- Evidence of academic capability judged to be equivalent.

▶ 1.5 years full-time (3 years part-time)

Your admission for the 12 credit Master of Applied Artificial Intelligence will be based on performance in:

- Bachelor's degree in a related discipline, **OR**
- Bachelor's degree in any discipline and two years relevant work experience, **OR**
- Graduate Certificate of Information Technology or equivalent, **OR**
- Evidence of academic capability judged to be equivalent.

▶ 1 year full-time (2 years part-time)

Your admission for the 8 credit Master of Applied Artificial Intelligence will be based on performance in:

- Bachelor's Honours degree in a related discipline, **OR**
- Bachelor's degree in a related discipline and two years relevant work experience, **OR**
- Graduate Certificate of Applied Artificial Intelligence or equivalent, **OR**
- Evidence of academic capability judged to be equivalent.

How to apply

Applications can be made online via **apply.deakin.edu.au/direct-applications.**

For more information about entry requirements, submitting an application or the application process, please visit **deakin.edu.au/courses/how-to-apply.**

Master of Applied Artificial Intelligence (Professional)

The Master of Applied Artificial Intelligence (Professional) is designed to extend the specialised skills obtained in the Master of Applied Artificial Intelligence by providing you with the opportunity to undertake a period of industry-based learning or a research project under the supervision of our internationally-recognised staff.

This course equips you with the specialist knowledge and skills necessary to design and develop cutting-edge software solutions that harness the latest advances in artificial intelligence (AI). You will also increase your understanding of the AI technologies, deep learning, reinforcement learning and the application of these algorithms in computer vision and speech processing.

As an AI specialist, you will work alongside software engineers, data scientists, application developers and business analysts, applying your knowledge to ensure AI is appropriately integrated into software solutions from a technical and human perspective.

Course information

Location: Waurn Ponds (Geelong), Online
Duration: 2 years full-time study or part-time equivalent
Intake: March (Trimester 1) and July (Trimester 2)
Deakin code: S737

Course structure

To complete the Master of Applied Artificial Intelligence (Professional), students must attain 16 credit points (cp). Typically, full-time students choose to study 4 units per trimester and usually undertake two trimesters each year.

The course is structured in three parts which comprise the following number of credit points (cp):

(8cp) + (4cp) + (4cp) = (16cp)
Part A   Part B   Part C   Total

Depending upon prior qualifications and/or experience, you may be eligible for credit towards your degree. You can also refer to the Recognition of Prior Learning System which outlines the credit that may be granted towards a Deakin University degree and how to apply for credit. For more information please visit **deakin.edu.au/study/how-to-apply/recognition-of-prior-learning.**

▶ For more information about this course, including further course structure and units details, visit **deakin.edu.au/course/master-applied-artificial-intelligence-professional.**

▶ Part A – Introductory Artificial Intelligence Studies

Machine Learning (1cp)

Mathematics for Artificial Intelligence (1cp)

Natural Language Processing (1cp)

Deep Learning (1cp)

Engineering AI Solutions (1cp)

Applications of Computer Vision and Speech Processing (1cp)

Reinforcement Learning (1cp)

Human Aligned Artificial Intelligence (1cp)

▶ Part B – Specialisation or Electives

Four units from a chosen specialisation (refer to next page) (4cp)

OR

Four electives (level 7 SIT or MIS coded units) (4cp)#

▶ Part C – Professional Studies

Professional Practice in Information Technology (1cp)

Team Project (A) – Project Management and Practices* (1cp)

Team Project (B) – Execution and Delivery (1cp)

One level 7 SIT elective (1cp)

OR

Career Tools for Employability (0cp)

Professional Practice in Information Technology (1cp)

Professional Practice* (2cp)

One level 7 SIT elective (1cp)

OR

Research Training and Project (2cp)

Research Project (Advanced) (2cp)*

OR

Professional Practice in Information Technology (1cp)

Research Training and Project (2cp)

One level 7 SIT elective (1cp)

Academic Integrity (0cp compulsory unit)

* Please refer to course page for specific details regarding unit requirements
# Excluding SIT771, SIT772, SIT773, SIT774

Specialisations

A number of specialisations are available for completion within the Master of Artificial Intelligence (Professional). Students wishing to undertake a specialisation for Part B of their studies can choose from the list below:

Blockchain and Software Development

Business Analytics

Cyber Security

Data Science

Information Systems

Networking and Cloud Technologies

Virtual Reality

Professional studies

Gain a competitive edge in the workplace with real-world expertise and practical skills by undertaking one of the following industry-based learning experiences or a research project.

Team projects

The postgraduate capstone units are designed to give you the opportunity to experiment and undertake real-world, industry-relevant IT projects as part of a collaborative team. Increase your understanding and experience of the product development environment by contributing and managing IT projects within a defined scope and schedule.

Professional practice

Get practical experience and hands-on learning by completing a placement as part of the Professional Practice unit. You will gain approximately 30-120 days of professional work experience with an approved organisation.

Research projects

Research and development skills and abilities are in-demand in the IT industry. Embark on a research project and develop skills and abilities for informed evidence-based practice that will help further your career.

Career opportunities

As a graduate you will be well-equipped to work on design, development and operation of AI-driven software solutions.

You will have the specialist knowledge needed to operate as a Data Scientist, AI Technology Software Engineer, AI Product Manager, AI Ethicist and also grow into roles such as AI Architect.

Interested in applying?

Entry requirements

Entry will be based on performance in:

- Bachelor degree in a related discipline, **OR**
- Bachelor degree in any discipline and two years relevant work experience, **OR**
- Graduate Certificate of Information Technology or equivalent, **OR**
- Evidence of academic capability judged to be equivalent.

How to apply

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For more information about entry requirements, submitting an application or the application process, please visit **deakin.edu.au/courses/how-to-apply.**

▶ ## Australia's #1 university career service+

Our award-winning career service – DeakinTalent – prepares you for the jobs of tomorrow. You'll have lifetime access to career coaching, industry networking opportunities and a comprehensive suite of digital resources.

deakintalent.deakin.edu.au

+ Australian Graduate Recruitment Industry Awards 2017–2020, winner for most popular career service in Australia.

Contact us

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